

National Organic Standards Board
Handling Committee and Materials Committee
Recommendations Relative to “Agricultural” and “Nonagricultural” Substances for National List Consideration
September 15, 2006

Introduction:

In the interest of clarity and consistency, the National Organic Standards Board (NOSB) Handling Committee (HC) and Materials Committee (MC) recommend to the NOSB a modification to the definition of “nonagricultural substances.” The HC-MC also recommends a guidance document in the form of a “Decision Tree” for use in deciding upon the classification of substances as “agricultural” or “nonagricultural”.

Background:

In regards to determination and classification of substances as “agricultural” or “nonagricultural,” the definitions found in the National Organic Program (NOP) Final Rule can be vague and sometimes even conflicting. Also, the rule does not provide a definition for agriculture. The net result of this is inconsistent application, and possible misclassification of substances as “agricultural” or “nonagricultural.”

The distinction between “agricultural” and “nonagricultural” originated with the NOSB. The Organic Foods Production Act (OFPA) was approved by Congress as part of the 1990 Farm Bill. USDA published the first Proposed Rule in 1997. Between OFPA becoming law and the first proposed rule being published, the NOSB was organized, functioning and by 1994 already developing the first proposed National List. It was at that time that the NOSB introduced the distinction between “agricultural products” and “nonagricultural substances.”

The NOSB adopted this distinction based on its understanding of OFPA requirements. Specifically that inclusion on the National List was required for any substance that “is used in handling and is non-synthetic but is not organically produced.”¹ The NOSB did not believe it was necessary to send materials for a Technical Advisory Panel (TAP) review that were merely non-organic agricultural products. Therefore, the NOSB recommended that non-organic agricultural products appear on the National List as a general category, rather than requiring TAP reviews for each specific agricultural product. NOSB also recommended that non-synthetic ingredients that were non-agricultural did not need to appear on the National List,² although this was later refuted as explained by NOP in the preamble to the second proposed rule of March 2000.³

¹ 7 US Code § 6517(c)(1)(B)(iii)

² NOSB Final Rec. Add. No. 10 General Food Labeling Standards, Oct. 31, 1995. p. 54 Green Book

³ NOP proposed rule, March 13 2000, p. 13588

At its meeting in Washington, DC, January 30-February 2, 1994, the NOSB voted unanimously to submit a list of materials for TAP review, but purposely excluded from the list “the category of non-synthetic, non-organic agricultural products.”⁴ The USDA ratified that decision in 1997 in the First Proposed Rule. In the Preamble, the Department pointed out that it was “in concurrence with the NOSB.”⁵

Accordingly, in that First Proposed Rule, the USDA set up two separate sections for ingredients in processed foods under the National List: Section 205.26 to list “nonagricultural substances” and Section 205.27 for nonorganically produced agricultural products. Section 205.27 provided that in general, non-organically produced agricultural product are allowed in products labeled “organic” or “made with organic.”⁶ These are the sections currently numbered as 205.605 and 205.606, respectively, in the Final Rule.

The root of the “agricultural” versus “nonagricultural” distinction traces directly back to recommendations by the NOSB. OFPA’s definition of “organically produced”⁷ specifically references agricultural products; the NOP Final Rule, in the definition section, defines organic specifically as “an agricultural product produced in accordance with [OFPA].” In the history of OFPA, and in the current NOP regulations, the working thought has been substances that can be organic must be agricultural.

The definition of an “agricultural product” in OFPA and in the NOP rule is consistent. 7 CFR Part 205 section 205.2 *Terms Defined*: “**Agricultural product** – any agricultural commodity or product, whether raw or processed, including any commodity or product derived from livestock, that is marketed in the United States for human or livestock consumption.”

However, OFPA did not define “nonagricultural;” therefore creating confusion regarding the definition of agricultural. The NOP Rule defined “nonagricultural substances” in the first National List that appeared in 1994. The definition in section 7 CFR Part 205, section 205.2 *Terms Defined*: “**Nonagricultural substance** – A substance that is not a product of agriculture, such as a mineral or bacterial culture, that is used as an ingredient in an agricultural product. For the purposes of this part, a nonagricultural ingredient also includes any substance, such as gums, citric acid, or pectin, that is extracted from, isolated from, or a fraction of an agricultural product so that the identity of the agricultural product is unrecognizable in the extract, isolate or fraction.”

These definitions in the Final Rule are inconsistent, and do not provide clear guidelines for evaluating a substance as “agricultural” verses “nonagricultural.” The substance “gums” is subject to the confusion caused by the inconsistent definitions. Gums, by the

⁴ NOSB Full Board Meeting Minutes, Washington, DC, Jan. 30-Feb. 2, 1994, p. 10.

⁵ Preamble to First Proposed Rule, 62 Fed.Reg. 65895 (Dec. 16, 1997), pp 65895

⁶ [Federal Register: December 16, 1997 (Volume 62, Number 241)], [Proposed Rules], [Page 65849-65898]

⁷ (14) ORGANICALLY PRODUCED.—The term “organically produced” means an agricultural product that is produced and handled in accordance with this title from Title XXI of the Food, Agriculture, Conservation, and Trade Act of 1990

current definition of nonagricultural in 205.2, should not be considered agricultural or organic (since they are listed as a specific example of a nonagricultural item). Yet water extracted gums are listed in 205.606 as agricultural items. Compounding the confusion, gums are available as certified organic products. This by definition means they must be agricultural. Inconsistencies have continued because of the conflicts with the current definition of “nonagricultural” substances. Many processed agricultural products have been extracted, isolated, or fractioned during processing to a point where the product no longer resembles the starting agricultural material. Examples of organic products in potential conflict with the definition include, but are not limited to: whey protein concentrate, milk protein concentrate, evaporated cane juice, and maltodextrin. All of these ingredients are “extracted from, isolated from, or a fraction of an agricultural product so that the identity of the agricultural product is unrecognizable in the extract, isolate or fraction”⁸ and by definition would not be agricultural.

Prior to the NOSB meeting in August 2005, the Handling Committee offered a proposal that would have determined yeast to be “nonagricultural.” After a debate among several NOSB members on August 16, 2005, the NOSB voted to defer discussion of this proposal and consider a proposal that was presented during public comment that yeast qualifies as an “agricultural product”.

Here is how that proposal was presented:

1. In OFPA, the definition of “livestock,” 7 USC § 6502 (11), includes “any cattle, sheep, goats, swine, poultry, equine animals used for food or in the production of food, fish used for food, wild or domesticated game, or other nonplant life.” In the NOP Final Rule, 7 CFR § 205.2, the definition of “livestock” also extends to cover “other nonplant life.”

2. Biological classification places fungi, including yeast, neither in the plant kingdom nor in the animal kingdom. Instead fungi are in a separate kingdom. At one time, fungi were thought to belong in the plant kingdom.⁹ However, in 1866 the biologist Ernst Haeckel introduced the “three-kingdom” structure, which set up a separate kingdom, Protista, for living organisms such as fungi that did not fit in either the plant or the animal kingdom.¹⁰

Since Haeckel devised his three kingdoms, other biologists have developed more complex systems of classification, but none of these other systems regard fungi as plants. Therefore, under all the biological classification systems since Haeckel, fungi, including mushrooms and yeast, have been placed outside the plant kingdom.¹¹

Since science considers yeast not within the plant kingdom, yeast, as a form of “nonplant life,” is within the legal definition of “livestock” in both OFPA and the NOP Final Rule.

⁸ 7 CFR Part 205, section 205.2 *Terms Defined*: “**nonagricultural substance**”

⁹ See “Plant Kingdom,” McGraw-Hill Encyclopedia of Science and Technology, 9th ed., 2002, Vol. 13, p. 658.

¹⁰ See “Classification, Biological,” McGraw-Hill Encyclopedia, Vol. 4, p. 219.

¹¹ Id., pp. 219-220.

3. OFPA, in 7 USC § 6502((1), defines an “agricultural product” as “any agricultural commodity or product, whether raw or processed, including any commodity or product derived from livestock, that is marketed in the United States for human or livestock consumption.” The NOP Final Rule defines “agricultural product” with the identical language found in OFPA. Yeast is included in the definition of “livestock” in both OFPA and the NOP Final Rule. Therefore, yeast, as a “commodity or product...derived from livestock,” qualifies as an “agricultural product” under both OFPA and the Final Rule.

4. Since yeast qualifies as an “agricultural product” under the applicable definitions in both OFPA and the Final Rule, it is not consistent with these definitions to have yeast treated as a “nonagricultural substance” in the National List in 7 CFR § 205.605(a)

The HC-MC accepts the proposal that yeast can be considered “agricultural” as part of “other nonplant life” as specified in the livestock definition. The joint committee further supports that this concept would include other microorganisms that are traditionally used in the manufacture and preparation of foods. This is part of the agriculture system of food production.

Applying this logic to microbes or products of microbes:

Yeast would be an agricultural product. It grows on plant products, is consumed whole in bread or in beer and has a history of use in food.

Lactobacillus, used to make yogurt and similar dairy products from milk, would be an agricultural product because it grows on an agricultural product (milk), is consumed whole, and has a history of use in food.

Mushrooms would be agricultural products because they grow on plant compost, are consumed whole and have a history of use in food.

The microscopic, filamentous fungus *Aspergillus oryzae*, which is used to make miso and soy sauce, would be an agricultural product. It grows on plant products and is consumed in various degrees of “wholeness” depending on how the miso is processed. Vitamins taken from bacteria and used in food would be agricultural products because they are made from microbes that are grown on plant products and because they have a history of being used in food.

Enzymes taken from fungi and used to make miso or soy sauce or to start cheese making would be agricultural products because they come from microbes that grow on plant products and have a history of being used in food.

Discussion:

To clarify the issue surrounding the definition of “nonagricultural substance” and expand the definition to include “other nonplant life” traditionally used in food products the HC-MC discussed the following modification to the definition of “nonagricultural substance:”

Nonagricultural substance: A substance that is not a product or component of agriculture, such as a mineral, ~~or a bacterial culture~~ that is used as an ingredient in an agricultural product. ~~For the purposes of this part, a nonagricultural ingredient also includes any substance, such as gums, citric acid, or pectin, that is extracted from, isolated from, or a fraction of an agricultural product so that the identity of the agricultural product is unrecognizable in the extract, isolate, or fraction.~~

In addition, the HC-MC felt that it would be helpful to provide guidance for defining agriculture to be used in determining the substance's status as "agricultural" or "nonagricultural." There was wide support for the use of a "Decision Tree" to assist in providing guidance. The Decision Tree used by the HC as a model was initially proposed to the NOSB in October 2004, via public comment, by Oregon Tilth (a USDA accredited certification agency). The HC-MC acknowledges it as a working document that has been revised and may need further modification prior to acceptance.

The HC-MC also recognizes that this interpretation of agricultural substances causes a conflict with two substances currently on 205.605(a): Dairy cultures and Yeast. The joint committee recommends, as a technical correction, moving these two items to 205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as organic or made with organic ingredients.

Recommendations:

There are three recommendations from the HC-MC:

1. A rule change for the definition of "nonagricultural substance"
2. Assistance in defining a "nonagricultural substance" by use of the Decision Tree. The goal of these recommendations are for a more uniform, transparent system for decision making related to "agricultural" or "nonagricultural" determinations.
3. As a technical correction, moving "Dairy cultures" and "Yeast" from 205.605(a) to 205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as organic or made with organic ingredients.

Recommendation #1:

The HC-MC recommend a Rule change for the current definition of "nonagricultural substance" as listed in 7 CFR section 205.2 *Terms Defined*. The recommendation is to modify the definition to read:

Nonagricultural substance: A substance that is not a product of agriculture, such as a mineral, ~~or a bacterial culture~~. that is used as an ingredient in an agricultural product. ~~For the purposes of this part, a nonagricultural ingredient also includes any substance, such~~

~~as gums, citric acid, or pectin, that is extracted from, isolated from, or a fraction of an agricultural product so that the identity of the agricultural product is unrecognizable in the extract, isolate, or fraction.~~

Recommendation #2:

The HC-MC recommends the adoption of the attached Decision Tree as guidance in determining a substance's "agricultural" or "nonagricultural" status. This is a practical solution which could work with both the current or modified definition of "nonagricultural substance". The decision tree should be used in conjunction with NOSB clarification regarding the definitions of "synthetic" and "nonsynthetic." (currently in development).

Recommendation #3:

The HC-MC committee recommends moving "Dairy cultures" and "Yeast" from 205.606(a) to 205.606 Nonorganically produced agricultural products allowed as ingredients in or on processed products labeled as organic or made with organic ingredients.

Conclusion:

The organic industry is an innovative industry with continued opportunities for growth and change. The modification of the definition of "nonagricultural substance" and providing guidance for what is agriculture will provide greater consistency and clarity in application and will allow the Final Rule to accurately serve this growing and innovative industry, without compromising the effectiveness of the definition.

The "Decision Tree" will be used as a tool to help strengthen the consistency of the National Organic Standards in regards to "nonagricultural" substances. It will provide a basis for certifying agencies, certified entities, and the NOSB to verify a substance's "agricultural" or "nonagricultural" status.

Committee vote:

Moved: Andrea Caroe

Second: Joe Smillie

Yes -- 8

No – 0

Abstentions – 0

Absent - 0

Criteria for Determining Agricultural vs. Non-agricultural Substances for Use in Organic Processed Products

